JANUARY 1947

FIREMEN

FIFTY-FIRST YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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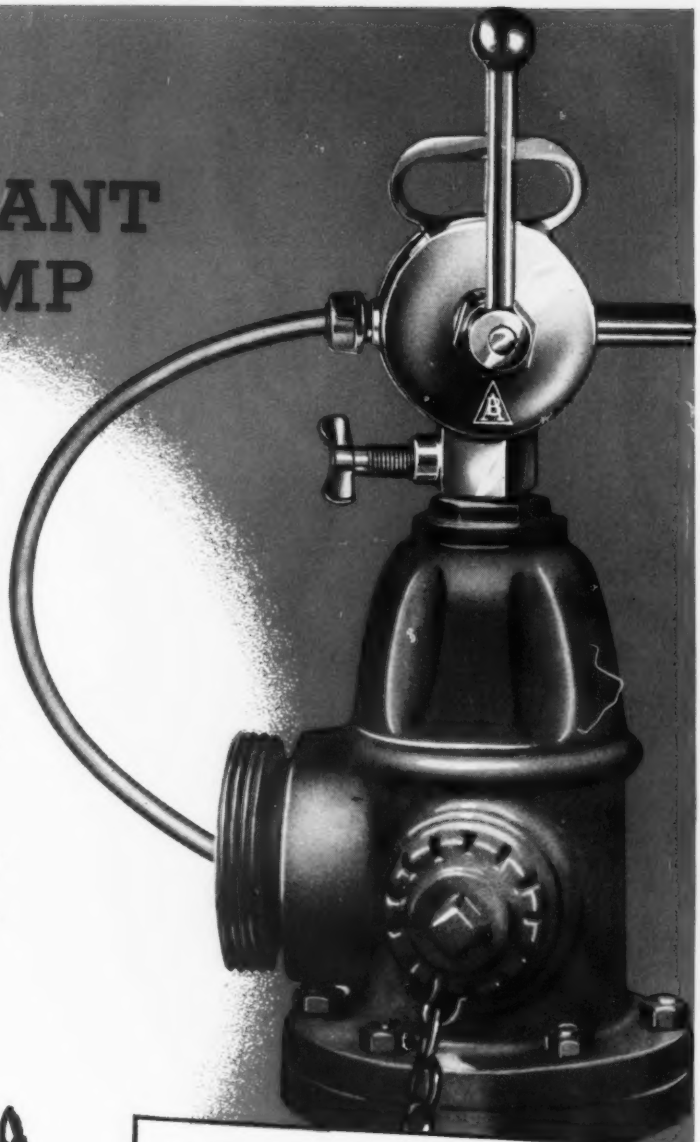
AKRON HYDRANT PUMP



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Firemen

Volume 14 Number 1

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UNITED STATES fire losses for the month of November totaled $44,706,000, according to National Board of Fire Underwriters' estimates. This figure was 19.6 percent higher than the November 1945 loss.

Fire losses for the twelve months ending in November amounted to $552,871,000, as compared to $453,945,000 for the year ending in November 1945.

A STUDY of several hundred of the more important fires reported by fire chiefs in recent months shows that an average of two or three firemen were injured in fighting each fire. A study of the various causes of the injuries indicates that a large proportion are caused by failure to heed instruction in safe fire fighting methods brought out in each department's training program.

Under the stress of fire ground conditions, even the veteran fire fighter is inclined to take short cuts and chances through his eagerness to speed up the urgent task ahead. Fortunately most of the injuries are of the so-called "minor nature" resulting only in temporary disability, but they are potentially dangerous, as any physician will point out. The danger of tetanus (lock jaw) and blood poisoning is not to be minimized.

A review of routine fire department injuries shows that they can be forecast with reasonable accuracy. For example, nail punctures in the foot were almost a regular feature of lumber yard fires. Cuts from broken glass were prevalent in almost every type of fire. Eye injuries from hot cinders and of course incapacity from smoke and hot gases were frequently reported.

Care in handling the fire axe in accordance with methods outlined at the fire school and use of hose and ladders as taught at drill school can eliminate a large percentage of the routine fire ground casualties. A most important factor is insistence upon wearing proper protective clothing. Boots should have metal soles to prevent nail punctures. Fire coats should be worn to guard against both excessive heat and cold. Fire helmets should be worn at all fires to guard against the serious danger of head injuries, and use of proper mittens and gloves will minimize injuries to hands.

Firemen who have recently experienced so-called "minor injuries" do not need to be reminded that it is not pleasant to have a wound cleaned out and stitches applied, not to mention the added details of tetanus shots and inconvenience from partial disability for a week or more. Such disability is perhaps more serious for the volunteer fireman who cannot afford to be excused from his regular employment, and with the paid fireman the department loses the services of a valuable member.

While an overcautious man will never make a good fire fighter, every experienced fireman should remind himself, while responding to each fire, that his services will be of little value if he is injured through his own carelessness, and that fifteen or twenty years' experience in the profession does not guarantee immunity if the training ground rules are broken.

A BULLETIN of the Uniformed Firemen's Association of Greater New York indicates that from January 1 to December 12, 1946, 4 firemen were killed and 1,867 were injured in performance of duty in New York City.

THERE is one line that appears again and again on reports of large fires sent in by fire chiefs throughout the country to the NFPA's Department of Fire Record — "Alarm was transmitted as soon as fire was discovered, but fire was through the roof when discovered." Anything that firemen can do in encouraging the installation of reliable automatic alarm devices and other forms of automatic fire protection will help curb the greatest single cause of major losses — delayed alarm.

THE cover picture this month (*Acme*) shows a typical hot fire at its most dangerous stage where fire fighters have a nip-and-tuck battle to protect exposed properties against wind-driven flames. Where heavy turret streams are not available, hose crews must take terrific punishment from heat and burning embers to push in close enough to cool the advancing edge of the fire and wet down exposed property. Note how the hose stream appears to be breaking just short of the objective and how radiated heat has ignited the siding and roof of the exposed dwelling.

The above 3-alarm fire destroyed a large lumber yard and two exposed dwellings in Scranton, Pa., on December 3, 1946.

Winecoff Hotel Disaster

FIREMEN'S preliminary report on the Winecoff Hotel fire is based on information telephoned from Atlanta by NFPA Engineer James K. McElroy, who flew to the scene after the fatal Saturday morning fire.

IT IS well known now that the Winecoff Hotel in Atlanta in which 122 persons perished by fire on the morning of December 7, 1946, was not "fireproof." But what was the crucial defect that allowed fire to sweep through this presumably brick, concrete and steel structure? If the reader can imagine having a tall boiler stack or flue with partial check damper at each floor as the only means of exit from a 15-story hotel, he will have a pretty clear idea of the situation as the guests in the Winecoff found it when they awakened to find the hotel in flames. A single, very narrow (3-foot 5-inch), open stairway served all the upper floors and funnelled the fire like a chimney from the third floor where it started. This stairway was not the cut-off, smoke-proof exit tower which usually is required for such buildings. It did not even have doors at each floor level.

It might be supposed that the occupants of the building, when they became aware of the fire (there was no local fire alarm system in the hotel to warn guests), might have remained in their fire-resistive rooms until the fire department brought the blaze in the corridor under control. Unfortunately, the guest rooms had wooden doors leading to the corridors and these had transoms which, when open, admitted heat and flame. As any fire fighter knows, the furnishings of a hotel room can make an uncomfortably hot fire.

In general, from the third to sixth floors, where the transoms were closed, the wooden doors to the rooms (there were fifteen rooms per floor) held until fire fighters advancing lines up the narrow stairway could knock down the fire. The occupants of these lower floors also had the advantage of being within reach of fire department aerial ladders. From the sixth to the twelfth floors it was largely a question of whether to jump or wait for the flames to burn through into the rooms.

Many guests attempted to descend knotted bed sheets, some reached fire department ladders successfully, others did not, as the sheets reached only a pitifully short part of the distance to the street and few persons have the athletic prowess to negotiate such a descent to safety.

Perhaps the most horrifying aspect of the tragedy was the number of persons who chose to jump to cheat the flames, even though this cost them their lives. Several firemen attempting rescues were injured when struck by falling victims. A number of fire department ladders were broken by falling bodies. The Atlanta Fire Department's new 100-foot aluminum alloy aerial ladder proved its worth. Although bent by the impact of a falling body, it remained in service. One of the city's aerial ladders was out of service awaiting repair parts. Four served at the fire, mostly ,75-foot wooden aerials.

Strangely enough, although fire usually mushrooms at the top, the fire department was able to get above the fire and knock it down before the top floors became fully involved. This was accomplished by use of fire department lines from standpipes in buildings across a 10-foot alley and across a 58-foot street. The building across the alley reached to about the twelfth floor of the hotel. Standpipe lines were also used within the burning hotel as fast as the firemen could fight their way upward. The hotel's standpipe was supplied by a 5,000-gallon tank on the roof, but fire department pumpers connected to the siamese at the street and provided about 95 pounds pressure at the top of the fire area.

One of the most powerful streams was provided by connecting three lines to a "multiversal" nozzle which threw a stream from the street to the upper fire area. However, as firemen will well appreciate, the very acute angle of this stream limited the amount of effective penetration that could be obtained. Several streams operated

"Fireproof"

THE WORD "fireproof" for many years has been missing from the fire protection engineer's glossary. Perhaps now after the Winecoff Hotel fire in Atlanta this misnomer will be stricken from the dictionaries of intelligent and rational human beings. Fire experts have long argued that nothing is "fireproof." Most substances are unable to remain unchanged for any length of time if subjected to sufficient heat generated by a fire. The effect of heat on unprotected structural steel should be well known to firemen. It is also common knowledge that certain metals, when in the proper physical state, will actually burn.

Fire protection engineers speak of "fire resistance" as something that can be measured under controlled laboratory conditions. They specify certain materials and certain structural practices that provide "one-hour," "two-hour," or even "four-hour" fire resistance. Such fire resistance, however, does not necessarily make a building safe for human occupants, because heat, smoke, and panic will kill human beings long before a fire-resistive structure falls prey to destruction by flames.

Fire after fire has proven that exit arrangements to provide ways of escape free from fast spreading flames, automatic fire protection, fire-retardant wall and ceiling finishes, are perhaps more important to life safety from fire than the flame resistance of hidden girders and floor beams which give the structure its needed stability.

The simple, easy-to-apply, and almost all-inclusive remedy to the problem of life safety in hotels and other buildings of mass public occupancy is an old friend of fire fighters that is almost always overlooked by officially appointed investigating bodies, searching for the "cause" of the holocaust, instead of the reason for the loss of life. For more than fifty years, automatic sprinklers have had a near perfect record in protecting lives against fire, particularly in industrial and mercantile properties. In Boston, where, following a disastrous fire more than thirty years ago, sprinklers were required in basements and hallways of apartment houses, hundreds of fires have been extinguished successfully without loss of life. Owners of apartments, hotels, and other large buildings of public occupancy throughout the land must be persuaded to provide automatic sprinkler protection in basements and all workrooms, as well as in corridors and stairways.

The requirements of the NFPA Building Exits Code, where followed, provide safe means of egress from buildings. Each floor must be made a separate fire area by proper stair enclosures. There must be at least two readily discernible means of egress available in case fire cuts off one path of escape, and an adequate alarm system.

A detailed report of the Winecoff Hotel fire tragedy will appear in the NFPA January Quarterly, which goes to all fire departments holding membership in the NFPA.

Acme

International

from elevations of perhaps 35 or 40 feet from aerial ladders, as shown in the photographs, likewise fell short of much of the fire area. The department's water tower had been deactivated in recent years but this equipment could have sent a stream only a little higher than the streams from the ladders.

The Atlanta Fire Department, consisting of approximately 385 men and officers under Chief C. C. Styron, mans twenty-two engine companies mostly equipped with 1,000 gallon pumpers, eleven ladder companies, and a squad company. They had fourteen 1,000-gallon pumpers at the fire, in addition

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Above, left. The morning after at the corner of Peachtree and Ellis Streets in Atlanta. This 15-story building was served by a single open stairway.

Below, left. Very little flame entered this room as bedding and the upholstered chair are hardly scorched, but the terrific heat peeled paper from the walls, cracked the mirror, and blistered woodwork and furniture.

Above, right. Atlanta firemen battled flames above the reach of ladders. Stream at right reaching tenth floor. Desperate hotel guests smashed ladders and killed firemen when leaping to escape flames.

Below, right. An Atlanta fireman surveys part of the narrow, open staircase that circled the elevator shaft. This open stairway was the chief factor in the rapidity with which the fire spread. Note spalling of corridor from intense heat.

International

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MAKING A GOOD JOB OF IT

BY WARREN Y. KIMBALL

A Modern Bucket Brigade

IT IS hard for the average fireman to judge correctly just how much water the hose stream he is manning is throwing toward the fire. In general, he judges the hose stream by that rather intangible something we call "form." It is not uncommon to hear such remarks as "what a sweet stream!" "that is pretty!" "see how she holds together," or "that is doing the business!" Rather nebulous definitions, but they leave no doubt that there is plenty of satisfaction in the hose crew when manning a line with which they can quickly blacken the fire.

Perhaps one of the reasons that it is hard for our minds to grasp a correct quantitative definition of the amount of water in a hose stream is that we are not very good in quickly converting the gallon measuring unit into something we really know. For small flows such as those from a gasoline filling station pump, a fuel oil delivery truck, or even our small booster line, we can grasp the significance of so many gallons per minute. But when we come to a powerful hose stream, we cannot clock the gallons streaming past the eye in that hard, white, or sometimes rust colored, cone of water.

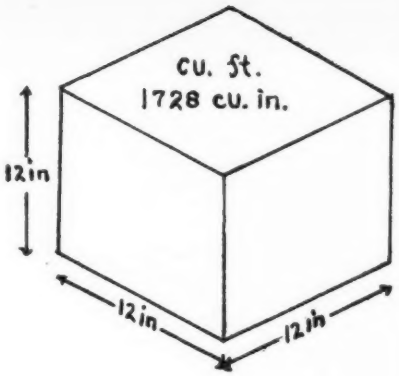
NOW most of us in one way or another are familiar with the good old 10-quart pail. We have a pretty good idea of how big it is, and how much water it holds. We are familiar with the heft of it, about twenty pounds when full. If we have ever had occasion to throw a pail or bucket of water, we have a pretty good idea of the amount of labor involved and how far we could throw it. Now our 10-quart household pail, filled to the brim, holds just two and one-half, or, as mathematicians put it, 2.5 gallons. (A fire pail is three gallons.)

It so happens that our standard 1⅛-inch nozzle, when discharging at a usual 45-pound nozzle pressure, is throwing an even hundred 10-quart pails full of water every time the second hand of your watch makes the circuit. Don't forget that amounts to 2,000 pounds, or a ton of water a minute.

Some evening at pumper drill, line up the boys, each with a 10-quart pail, and see how long it takes them to throw 100 pails full at an imaginary fire. But do it in warm weather! (A 12-quart pail filled within an inch or two of the brim will do.) Your 1⅛-inch nozzle is throwing five pails full every three seconds and is throwing them much straighter toward the fire than you can do. You will not get the 63-foot horizontal reach with your pail that the nozzle gives at forty-five pounds pressure.

Now we have a new yardstick we can use to check up on the old gallon. The word "gallon," incidentally, is of obscure Celtic origin, but perhaps appropriately our present United States gallon is none other than the old English wine gallon containing 231 cubic inches or 3.78 liters. Canadian and British firemen use the larger imperial gallon of 277 cubic inches or 4.54 liters.

Getting back to our 10-quart pail that we usually find around the garage or fire station, we can measure the other sizes of hose streams as follows: ½-inch tip on the 1½-inch line, 20 pails per minute; ⅝-inch tip on the 1½-inch line, 30 pails per minute; or the favored 1-inch tip on the 2½-inch line, 80 pails per minute. We could say that our 500-gallon pumper handles 200 pails of water, or the 750-gallon pumper 300 pails of water, but that still gives us a fairly large figure even for these days of millions and billions. Let's find a larger and perhaps an easier to understand unit of measurement for large amounts of water.



Our waterworks friends, who bring our fire stream water as far as the hydrant and to the kitchen tap, use a very simple and convenient measure for water. Look on your water bill, if you used metered water, and you will be likely to find consumption measured in cubic feet. That certainly makes a simple unit of measure: 12 x 12 x 12 inches.

What has the waterworks man's cubic foot got that the fireman's gallon lacks? The simple answer is that the cubic foot holds a lot more water than the gallon. We have already noted that the U.S. gallon consists of 231 cubic inches, a comparatively small amount compared with the 1,728 cubic inches in the cubic foot. The cubic foot holds no less than 7.481 gallons. Thus 100 cubic feet of water equals 748.1 gallons or almost exactly the capacity of our familiar 750-gallon pumper. This pumper can fill an area of 10 x 10 feet with a foot of water in one minute, or it can draw down a 10-

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Keystone

"It Can't Happen Here" —BUT IT DID

An "it can't happen to me" attitude on the part of a lumber yard management resulted in a fire that wiped out the property and endangered the entire warehouse district of Benton Harbor, Mich., on November 20.

A FIRE, suspected to be of incendiary origin, swept the B. M. Nowlen and Sons lumber yard in the warehouse district of Benton Harbor, Mich., early on the morning of November 20, 1946. The alarm was turned in at 3:05, but within ten minutes the entire building had burned down and thousands of feet of lumber in the sheds were blazing furiously. The fire reached its peak within a half an hour and by 4 A.M. had destroyed the entire block, with the exception of a basket factory (*see map*).

Fire Chief Ray Hall, several years ago, had predicted the fire and had served the company with written fire hazard notices. He received nothing but promises from the management. We quote from a letter written a year ago to the company by Chief Hall:

"Some time ago, this department, working in cooperation with the fire engineers of the National Board of Fire Underwriters, made a technical survey of the building housing the lumber material yard. It was our unanimous determination that this building was definitely a target fire hazard, as it presented an ideal setting for a conflagration. Therefore the time has arrived when steps must be taken to correct this hazardous condition.

"It is also the unanimous opinion of all the fire engineer experts that we have consulted that it would be an impossibility to effectively fight a fire in this building. The old wood walls enclosing the lumber yard would immediately take fire, and the heat of these walls burning would generate such a tremendous heat that it would be impossible to station our fire apparatus within a block of the building, nor could our firemen get close enough to the burning building to play streams of water into it. This fire would, without any question, spread to the adjoining structures of other property owners, in fact we dread even to think of the great damage it would cause.

"We know it is the opinion of the owners that as long as they have never suffered a fire in this building there isn't any need for precautions. This is no basis for an argument that there will never be a fire in the building because there must be a first time for everything. National statistics prove that the only way to hold a lumber yard fire from spreading is to enclose the yard with a fire-resistant wall; therefore, it is my duty to demand that immediate steps be taken to protect the exposures to a potential fire in this yard. A brick wall must be erected from the ground to the eaves of the roof, enclosing the entire yard, if not brick, other fire-resistant masonry can be used. The roof must be covered with fire-resistant galvanized roofing and a sprinkler system installed.

"A copy of this letter is in our files and open to public inspection for future investigation. Trusting that you will immediately comply with this order,

"RAY T. HALL, *Fire Chief*"

The fire appeared to have originated in the switch control box which was located exactly where the fire started in a southwest corner. The box was a type that had to be pushed into operation with a stick and had a string or rope to disengage it.

The fire spread westerly, following the inside of the roofs to the extreme end of the buildings. Vertical doorways through each of the sheds created a natural draft. There were no fire doors, no fire walls, no possible chance to cut off the fire, and no protection against exposures. The company did not even provide watchman service. Both the sheds were of wood construction, each consisting of one room, with cinder floors and tar paper roofs.

The firemen laid out more than 5,500 feet of hose to cover the fire and played nine 2½-inch pumper lines on the sheds, at the same time combating minor blazes on the roofs of several adjacent buildings. They had to cut their way through a door of the Michigan Fruit Canners' warehouse to fight a fire which had eaten its way into the warehouse and among thousands of cardboard cartons which were stacked along the wall facing the lumber sheds.

The fire destroyed the city's worst fire menace and imperiled millions of dollars worth of buildings and stock in adjoining warehouses. Both Benton Harbor and St. Joseph departments battled to save the downtown section from going up in flames. Only the fact that there was almost no wind, and that conditions were otherwise exceptionally good for fire fighting, kept the blaze from turning into a holocaust.

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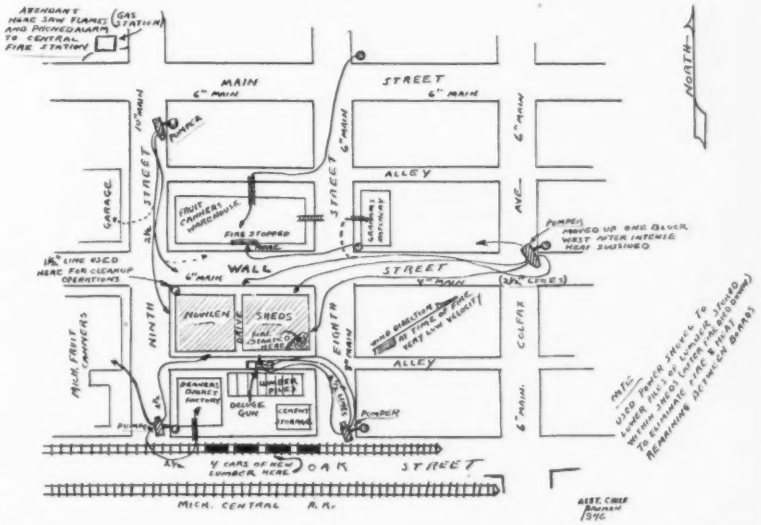
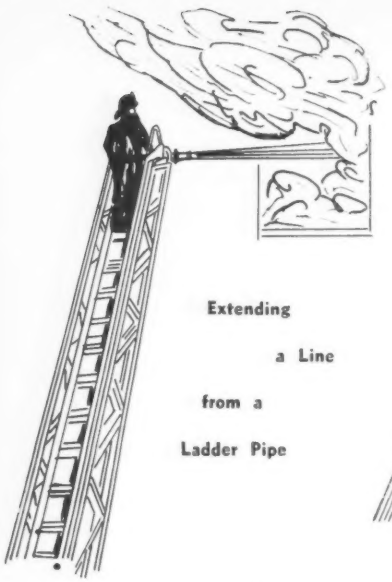
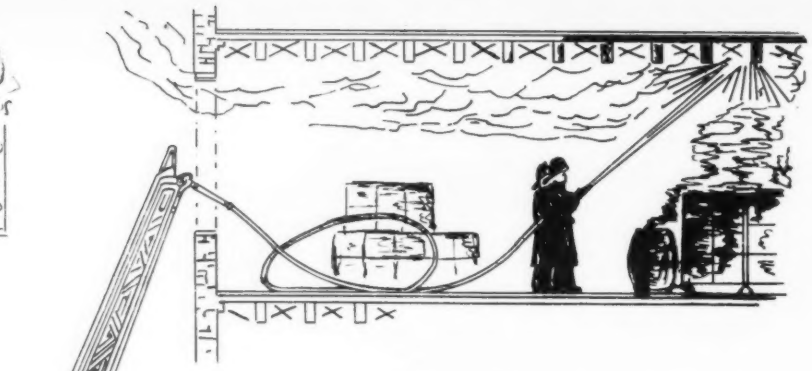




Extending a Line from a Ladder Pipe



Chief L. P. Scully (NFPA member), of Erie, Pa., specifies standard 2½-inch hose thread for the nozzle tips on his aerial ladder pipes. When a fire occurs on an upper floor, an aerial ladder is raised to the desired point and, instead of dragging a line up the ladder, a doughnut roll or two is attached to the end of the ladder pipe which is then charged with the proper pressure.

When a fire is breaking from an upper window, the ladder pipe may be used first to drive the flames back inside and then the mop-up work carried out by advancing the line from the tip of the ladder pipe. It may be a good idea to have a gate valve in the line at the base of the aerial ladder so it will be unnecessary to shut down the pumper when advancing the line from the tip.

Tricks of the Trade

Stocking Caps

Many firemen have discovered that a woman's stocking cut off and tied at one end makes an effective stocking hat to wear under their fire helmets to protect their ears in winter weather.

Below, the artist has shown the fireman entering the nylon line to get his ear protectors.

Roll Out the Carpet

Many persons have dreaded the visit of the fire department, not only because of fear of flame, but because of apprehension as to the condition of their home after the firemen leave. Cartoonists have commonly showed firemen tramping into a house with heavy boots and pulling down a crystal chandelier with carelessly carried plaster hooks. Such caricatures are very unfair to the well trained modern department.

Firemen of Stillwater, Okla., for example, carry a roll of roofing paper on the truck. This is tossed in the front door ahead of the first firemen to prevent damage to polished floors or to the carpets while the firemen tramp around looking for the blaze.

If any fire department has tricks of its own they would like to see appear in "Firemen," write Tricks of the Trade, care of the Editor, "Firemen" magazine.

Macon Fire Dept. Makes Sprinkler History

February 21, 1946. Thorpe's Clothing Store, Macon, before automatic sprinklers were installed.

HERE'S what one fire department is doing to cut down their city's fire losses in the business district. Realizing that the automatic sprinkler is the fireman's strongest ally in a mercantile fire, Chief Guy L. Moseley, of the Macon, Ga., Fire Department, is encouraging the installation of sprinkler systems in every business house in the city. Adopting the slogan "Help Save Life and Property," Chief Moseley has distributed the following bulletin on the progress in Macon's sprinkler history:

OUR hats are off to those sixteen merchants and business houses who have voluntarily completed installations of sprinkler systems in their places since January first of this (last) year. The last five completed in the past few days are Georgia Fruit Industries, 652 Broadway; H. E. Lowe Electric Company, Second St.; Macon Shirt Factory, Broadway and Poplar Sts.; Macon Mirror Works, Broadway; and Willingham Sash & Door Company, Third St. Many thanks, gentlemen, you have not only protected yourself but also your neighbors and your city.

"New contracts let on sprinklers now being installed total seven. They are as follows: Macon Peanut Company; Macon Hospital; Y.M.C.A.; A. S. Hatcher; Bed Spread Factory, Fairview Ave.; Macon Cabinet Works; Macon Linen Supply Company, Third St.

"Bids requested for sprinklers are as follows: (Total, eight buildings.) Capitol Theatre; Rialto Theatre; Ritz Theatre; East Macon Theatre; Silvers Building; Western Auto Building; Salvation Army Building; American Legion Home, First St. There are others planning for sprinklers soon.

"The man who does not have complete automatic sprinkler equipment in his building has only himself to blame if he is ruined by fire. Don't cuss the fire department. It is not their fault. It is not fair to firemen when you yourself are guilty of such gross negligence. You may have been lucky so far, but don't crowd your luck too far. Read this and hurry to a sprinkler salesman for a fitting.

"Report from Charlotte, N. C., June 1, 1945 to May 1, 1946, is as follows:

Total Fires	*Sprinklered Buildings*	*Not Sprinklered*
58	43	15
	Damages, Sprinklered	*Not Sprinklered*
	$23,551	$351,156

"Thus you see forty-three fires in protected buildings amounted to $23,551, whereas only fifteen fires in non-sprinklered buildings totaled $351,156. The losses in the unsprinklered buildings were about fifteen times greater than the losses in the sprinklered buildings, even though the sprinklered buildings had about three fires to each one in the unsprinklered buildings. This record proves that the tiny sprinkler in the ceiling is a silent fireman that does its job in top-notch fashion.

"Comparisons prove that you lose money if you do not have sprinklers. Why not stop your losses? We give you comparisons on one of the recent sprinklers savings in Macon: (See table at bottom of page.)

"We still expect to hear about your sprinkler soon. Call us if you need us."

Guy L. Moseley

Chief, Macon, Ga., Fire Department

BATEMAN & COMPANY

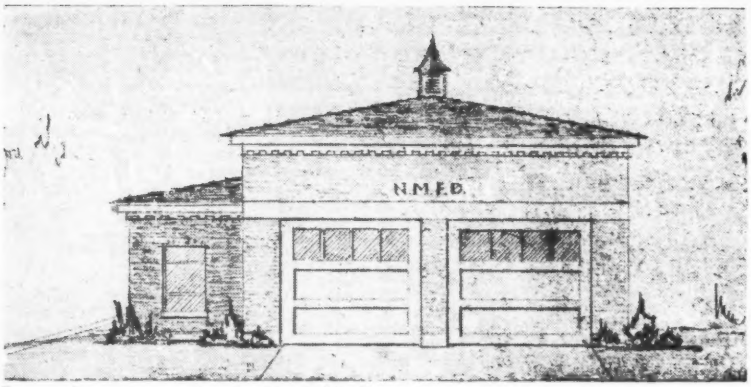
Before Sprinklers — Premium Rate per $1,000 Insurance		*After Sprinklers*	*Difference Saved*
Contents Rate per $1,000 Ins.	$11.20	$3.00	$8.20
Bldg. Rate per $1,000 Ins.	7.10	2.00	5.10
Prem. Estimated Total Ins. Contents	5,600.00	1,500.00	4,100.00
Prem. Estimated Total Ins. Building	2,840.00	800.00	2,040.00
Estimated Savings each year on premiums		Total	$6,140.00

* * *

1947 Pennsylvania Fire School Plans

THE Pennsylvania Fire School Advisory Committee met at Harrisburg, November 1, and decided to recommend to the next session of the state legislature that a permanent fire school plant for fire training under actual fire conditions be constructed at Lewistown.

The Ninth Annual Pennsylvania Fire School was planned for Lewistown, during the week of July 27, 1947.



Proposed new fire station for North Muskegon

The Editorial That Bore Fruit

"Occasionally . . . the fire department is faced with the problem of getting public backing and financial aid in order to improve its equipment and operations. At such times it must be ready to present its case directly to the voters or to the officials holding the municipal purse strings."

BASING their campaign on the FIREMEN editorial (September 1946) which is quoted, in part, above, the North Muskegon, Mich., Volunteer Fire Department (NFPA member) in the November elections convinced the voters to pass a proposal increasing the tax rate to pay for a much-needed new fire station.

At the present time a $50 lean-to houses the fire equipment in North Muskegon, apparatus that must stand ready to protect property valued at $3,500,000.

In an open letter in the *North Muskegon Star*, Chief Ed Kleeka, Jr., wrote:

"DO YOU . . . realize how serious the fire station problem really is?

"Do you know that your city has about $15,000 invested in fire fighting equipment? This equipment is now housed in the *Number One* fire trap in the city. "Do you know what it would cost each taxpayer if, by chance, the 'cowbarn' or lean-to attached to the city hall would go up in flames with all your fire fighting equipment with it?

"It will cost you approximately two mills for three years to duplicate the present equipment you now possess, which is the amount asked for the new fire station.

"To be honest with you, I would say that the city of North Muskegon has been lucky with the fire alarm system as it now operates. We have telephones in the residences of Mr. Cooper and Mr. Farmer; also one phone in the city hall. Your city hall closes at 5 o'clock. There is no one in the building from Saturday noon until Monday morning. Mr. Cooper and Mr. Farmer receive no compensation for answering the phone and throwing the switch to sound the alarm. In case no one was home at either residence or at the city hall and your home should catch on fire, what would you actually think of your fire department?

"The solution to our problem would be a new 'fireproof' station, complete with a modern fire alarm system patrolled twenty-four hours a day.

"I, personally, think your volunteer fire department is doing a splendid job and with your cooperation on the proposed amendment for the new fire station, the city of North Muskegon will have the necessary protection of a first class city."

Like the FIREMEN editorial, which was reprinted on attractive red cards for distribution purposes, local newspapers stressed the importance of the two-mills-for-three-years tax rate increase. Applied to thousand of dollars of taxable property it would provide considerable revenue, while working very little hardship on the individual taxpayer.

In one issue of the *North Muskegon Star*, the fire department proposal took up nearly the entire issue. A story from FIREMEN was quoted ("Fire Counter-attack," June 1946, page 16) stressing the threat to the community when the local fire station was not of fire-safe construction.

The accomplishment of this volunteer department in successfully presenting its case to the taxpayers is an example for many other small departments in the same situation of housing expensive and irreplaceable apparatus in hazardous and inadequate quarters.

Attention---North Muskegon VOTERS

The North Muskegon Volunteer Firemen wish to inform the North Muskegon electorate they are backing no particular candidates for mayor or city council. They are confining their activity in the municipal elections solely to promoting Amendment No. 5, providing for 2 mills for 3 years to finance a modern fire station.

NORTH MUSKEGON VOLUNTEER FIRE DEPARTMENT

—Political Adv.

★ ★ ★

Tenth Floor Rescue from Washington Hotel

TEAMWORK and perfect co-ordination between fire companies in Washington, D. C., recently effected an amazing tenth floor rescue from a burning hotel. The Editor has asked Chief Clement Murphy, of the Capital's fire department, to describe the rescue.

"At 5:04 A.M., November 3, 1946, fire alarm headquarters received a telephone call from the Roger Smith Hotel reporting the fire and that people were about to jump. They immediately dispatched Engine 1, Truck 3, (100-foot aerial) and the 6th Battalion

Chief, M. H. Sutton, and set up Box 354, a four-company box only a few yards from the hotel.

"Upon arrival, Chief Sutton was informed that the fire was on the tenth floor and that persons were trapped.

The Roger Smith Hotel. X marks the window from which the rescue was made by Pvt. W. D. Barnett.

Proceeding to the tenth floor, via awaiting elevator, and observing the dense smoke and intense heat, he instructed his aide to call for a second alarm, which was done over the hotel phone.

"Meanwhile the box alarm companies were arriving.

"He ordered Truck Company No. 2 to the alley to raise their aerial and rescue the trapped people. Engine Company No. 2, under the command of Sgt. M. E. Wallace, having arrived on the tenth floor by elevator to haul a line of hose up by lifeline, heard of the order and trapped persons. Sergeant Wallace, realizing that the 100-foot aerial ladder would not reach the tenth floor, took his men to the roof and instructed Pvt. W. D. Barnett to tie a rescue knot, stating that they would have to lower someone down to get the people. Private Barnett tied the knot, placed it on himself, and was lowered to the tenth floor window.

"Meanwhile Pvt. F. H. Williamson of Truck Company 3 was on the ninth floor calling to and pleading with the persons not to jump and that help was on the way. Simultaneously the aerial ladder was raised to the eighth floor, its maximum reach, and Private Barnett lowered by members of Engine 2 and two members of Truck 2 who were already on the roof ventilating. Private Barnett swung himself into the window and grasped Miss Lucy Brown in his arms and was lowered to the ladder, where he turned Miss Brown over to Pvt. C. F. Lennox of Truck Company No. 2. He was raised again to the tenth floor window to get Mr. Brown, but upon entering the room found that the fire had been knocked down enough by members of Rescue Squad No. 1 and Engine Company No. 1 (wearing masks) for Lieut. A. A. Thompson and Pvt. W. E. VanSickle of Truck 3 to effect the rescue of Mr. Haynes B. Brown from the inside.

"The fire involved room 1026, the hallway, and had started to work in room 1028, the room in which Mr. and Miss Brown (brother and sister) were located.

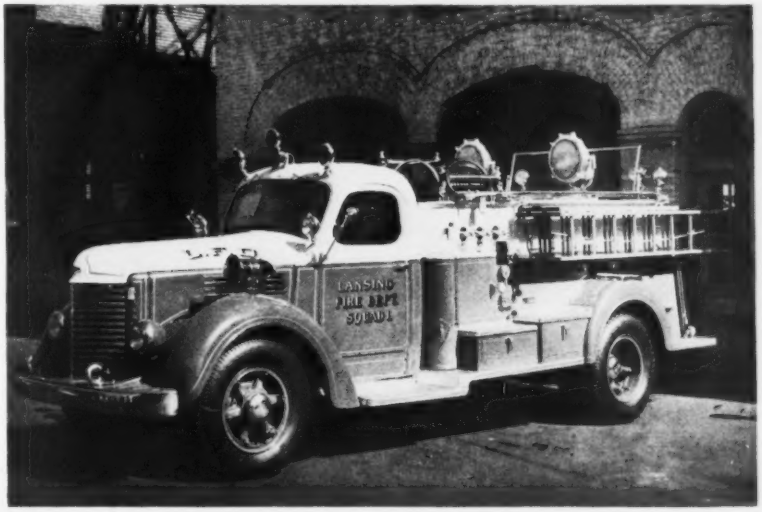
"I hope you can picture the simultaneous action of the engine and truck companies in working quickly to perform the rescue and bring lines of hose to the tenth floor. In all, the rescue and control of the fire was performed within five minutes from the time of the arrival of the companies. This fast work was accomplished by the elevators being entirely at the disposal of the fire department.

"It is particularly gratifying, considering other hotel fires. Had detection of the fire or the sounding of the alarm been a minute later, the story may have been quite different, as the fire was checked at its primary rolling stage. The other guests were able to escape by the outside fire escapes and stairways. Any delay probably would have resulted in the persons jumping and flames enveloping the entire section of the floor. You can well imagine, as persons vacating room 1026 left hastily and didn't bother to close the door, that when the Browns opened their door — flame, heat, and smoke greeted them and shut off their avenue of escape."

Lansing's New Squad Unit

THE Fire Department of Lansing, Mich., under Chief Hugh Fisher, marked Fire Prevention Week by placing in service at the central fire station a new squad unit of especially picked men headed by a deputy chief on each shift manning a high-pressure fog fire truck. This unit, equipped with two-way radio, will answer all alarms in the city. The apparatus carries a 2000-watt generator with lights and accessories, a 60 gpm pump supplying two high-pressure hand lines with gun-type nozzles operating at 650 pounds psi, supplied by a 430-gallon water tank. It is anticipated that fast attack with the high pressure equipment will cut down water losses and knock down many fires that might otherwise require 2½-inch lines. The apparatus was manufactured by John Bean Mfg. Co., also of Lansing, Mich.

It is planned at a later date to install two more of these "flying squad" units in other parts of the city. This is an outgrowth of excellent results obtained with high pressure equipment previously installed on several Lansing fire trucks.



NFPA announces publication of THREE (3) NEW BOOKS

Arson detection, mercantile fires, and a public relations guide for fire departments represent latest in National Fire Protection literature

Must Stores Burn?

WOULD you like a grandstand seat at 6,209 fires? Are you concerned with the continued operation or the fire safety of a retail store? Or

do you protect or sell fire protection equipment to store owners? *Must Stores Burn?* was written for anyone answering yes to the above questions. For the tremendous values involved, mercantile properties have had about the worst possible fire record, and, in general, the least developed private protection against fire.

The material is presented in a concise but comprehensive manner so that it can be presented in the language of the layman. Technical discussions and theorizing are avoided.

Attractive in an ivy green cover, well-illustrated with twenty-nine spectacular fire scenes, the two-color 48-page book reviews 6,209 fires in mercantile stores during the period 1930–1945, analyzes the facts about these fires, illustrates the cures, and presents the statistics to back up the facts.

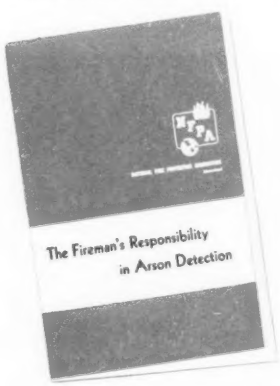
The price is $1 for each copy. Quantity orders of 100 or more will receive a discount.

The Fireman's Responsibility in Arson Detection

THE key witness in an arson case is the fireman. He is considered an expert by the courts, as he is one of the first on the scene at a fire and has a chance to observe unusual or suspicious circumstances. The new manual, *The Fireman's Responsibility in Arson Detection*, instructs the fireman in what to note and how to preserve and present evidence in cases of suspicious fires.

The book is intended for circulation to responsible persons and should not be placed in the hands of the general public, as experience has proven that any public discussion of arson may stimulate mentally unbalanced persons to start fires.

The 28-page manual, prepared by the Committee on Firemen's Training, has been approved by the Fire Marshal's Section of the NFPA for use by fire departments in the United States



and Canada. It has been highly praised by leading arson investigators and fire marshals. The manual carefully distinguishes between the work of the fireman in arson cases and that of the professional investigator.

Single copies of *Arson Detection* are priced at $.50. With quantity orders of ten or more, the price is $.40 per copy, and in lots of 100, $.25 per copy.

A Public Relations Manual for Fire Departments

SOON to be seen on NFPA book lists, is the latest of the Association's know-how manuals for fire departments, *A Public Relations Manual for Fire Departments.*

During the present epidemic of disastrous fires, the fire department has come in for an undue amount of criticism by a misformed public. Newspaper accounts of fires, as a rule, do nothing to exonerate the department in the public eye. It is the department's job to provide a public relations service where correct information could be given out to any agency. The *Public Relations Manual* explains how such a service could be organized and how it would work. News released on seasonal fire hazards and periodic reports on fire department activities would be sent out so that the public would hear about their fire department at other times than when a big fire makes the headlines.

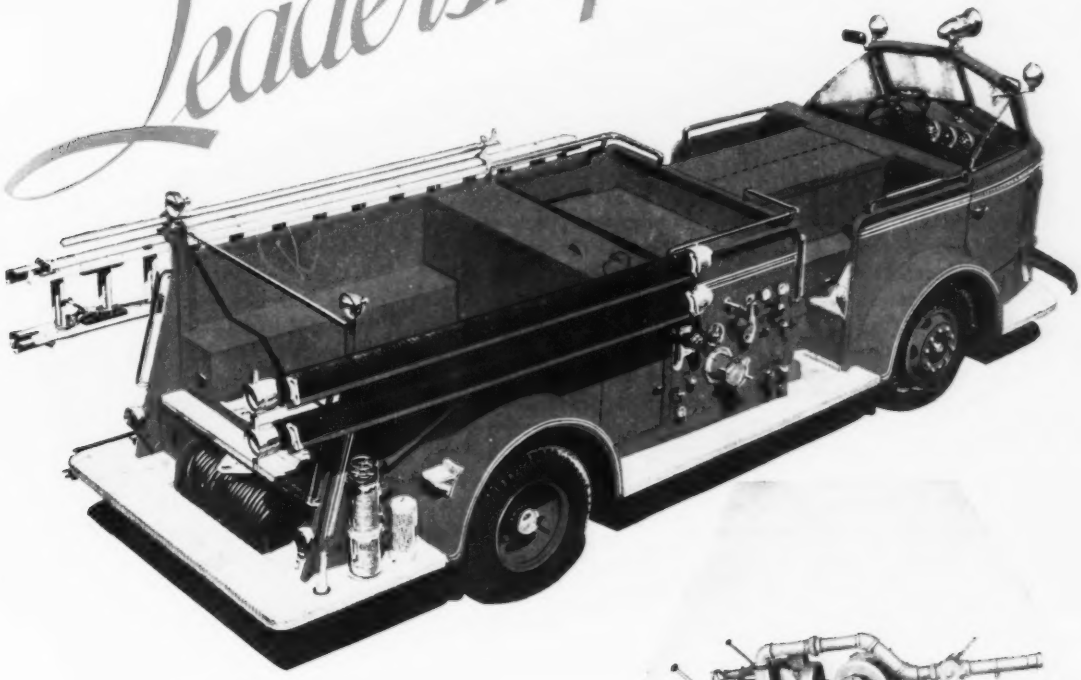
The *Manual* is an elaboration of the three articles that appeared in FIREMEN, April, May, and June 1946, entitled, "Public Relations Pays Dividends," "Getting the Right Headline," and "Writing the News Release."

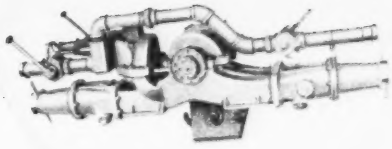
Sample news releases, radio material, and typical fire department publicity programs are outlined in the manual, which was prepared by the NFPA Committee on Public Relations.

REPRINTS AVAILABLE

"Fighting a Factory Fire," which appeared in the October 1946 FIREMEN, is available in reprint form from the Factory Mutual Companies Inspection Department, 184 High Street, Boston 10, Mass.

AMERICAN-LA FRANCE *Leadership* GIVES YOU THE TRIPLEFLOW PUMP





The new Cab-Ahead-of Engine pumpers have a new two-stage centrifugal pump—the TRIPLEFLOW for superior performance. It has:

- **All bronze housing**
- **All bronze impellers**
- **Double suction impeller on first stage**
- **Large capacity reserve**
- **Ball bearings in pump—no plain bearings**
- **Exhaust ejector type priming**
- **Automatic packings—will not dry out or char**
- **Hydraulic balance at all pressures**
- **Class A rating (Capacity at 150 pounds pressure)**
- **Impellers in *both* static and running (dynamic) balance**
- **Replaceable seal rings on impellers and in the housing**

Rear suction or front suction if desired. Auxiliary 2½ inch suction inlets also available.

WRITE TODAY FOR FURTHER DETAILS

AMERICAN-LA FRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.
LA FRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA

ALFCO

Winecoff Hotel Disaster

Continued from page 7

to most of the ladder companies. A number of fire companies from Fulton County moved into the city under a mutual aid plan.

The Winecoff Hotel was at the corner of Peachtree and Ellis Streets in the heart of Atlanta. Within two blocks were fire stations 4 and 8, each housing a pumper and ladder truck. Within half a mile was No. 1 station with another aerial ladder, a pumper, and a rescue squad company. First alarms in the district where the Winecoff was located consisted of 4 pumpers, 2 ladder trucks, and 1 squad car carrying rescue equipment.

The exact cause of the fire may never be known. It did start near the stair well on the third floor. There was a mattress in the corridor on which, it was thought, someone might have dropped a cigarette. Or a fire, possibly the ignition of the mattress due to smoking, may have occurred in a guest room and the mattress removed to the corridor in the belief that the fire had been extinguished.

There was a watchman who was supposed to make 2-hour rounds but the fire occurred shortly before a round was scheduled to start. A bellboy answered a call in Room 510 about 3:15 A.M. When he came from the room some time later, he reportedly found the stair well and hallway a "roaring furnace." Apparently no attempt was made to use the elevators. These had wired glass fronts, through which the flames could be observed, but the wired glass was set in wooden doors affording scant protection as the elevators were adjacent to the stairway up which the flames traveled.

Many unthinking persons have urged that outside fire escapes would have permitted the occupants to have escaped. This is largely refuted by the picture on page 7 which shows how flames issuing from the windows would have made these escapes as useless in this instance, as they have been on many past occasions where fire escapes have given a false sense of security. In addition, it would have been impossible to use the corridors to reach fire escapes. A much more simple expedient would have been proper stair enclosure to confine the fire to any one floor where the fire department could have controlled it easily. Automatic alarm equipment to give prompt notification and automatic sprinklers in hazardous areas of a hotel greatly enhance safety.

The initial alarm to the fire department was at 3:42 A.M., after a delay. Like the LaSalle Hotel fire in Chicago and the Canfield Hotel fire in Dubuque, Iowa, there will be arguing for weeks about how long the delay was. Whatever it was, it was too long and doubtless prevented the firemen from knocking down the fire before it burned through into individual guest rooms. The corridors of the Winecoff Hotel were unusually narrow, which tended to confine the heat. In addition, corridors were wainscotted with recently painted burlap which must have contributed to the extension of the fire.

In general, no new lessons were learned from the fire, although it may be expected to bring about better enforcement of existing safety laws and regulations for hotels, together with provision for more extensive automatic protection. Provisions of Atlanta's building law, adopted in 1911, permitted a single unprotected stairway in a hotel of less than 5,000 square feet in area when the building was built in 1913. The area of the Winecoff was 4,386 square feet. It should be recorded that two of three greatest hotel fire disasters in the present century have occurred in Atlanta. Prior to the Winecoff fire, only the LaSalle hotel fire in Chicago had exceeded the toll of thirty-five lives taken by the fire of May 16, 1938, in Atlanta's Terminal Hotel. It is recalled that the city council had enacted a special ordinance to permit erection of the Terminal Hotel in violation of the building code. In this previous fire, open stairway and elevator shafts also permitted flames to cut off the exits before firemen arrived and more than half of the guests lost their lives.

★ ★ ★

Mid-Winter Meetings

January 7–10. 19th Annual Fire Department Instructors' Conference, Memphis, Tenn., at fire department headquarters.

January 16. NFPA Hotel Fire Safety Conference at the Ben Franklin Hotel, Philadelphia. All persons interested in hotel fire protection and safety to life in hotels are invited to attend.

FEDERAL ELECTRIC COMPANY, INC.

SIREN HEADQUARTERS

How

POWER

is built into this

FEDERAL

***Traffik-King* SIREN**

Oscillating Red Light; Single or Double Tone; Coaster Model

The tremendously powerful tone of Federal Traffik-King sirens demands attention over other traffic noises, clears the way. This model has a distinctive double tone; and it coasts almost two minutes after current is off. Special clutch mechanism releases rotor; coasts much longer than so-called "long roll" types, which seldom roll over 30 seconds. Electric solenoid brake on rotor stops sound instantly.

Durably built for long, dependable, maintenance-free service.

Rotors: cast aluminum, precision-machined, individually balanced. Thin, smooth blades for high efficiency.

Ports in rotor and stator accurately spaced, finished to square sharp edge; assure true pitch, powerful tone.

Motors: heavy duty; bronze or ball bearing; 6 or 12 volts.

WRITE for FREE BULLETINS

Details, illustrations, prices, on this and other FEDERAL Sirens

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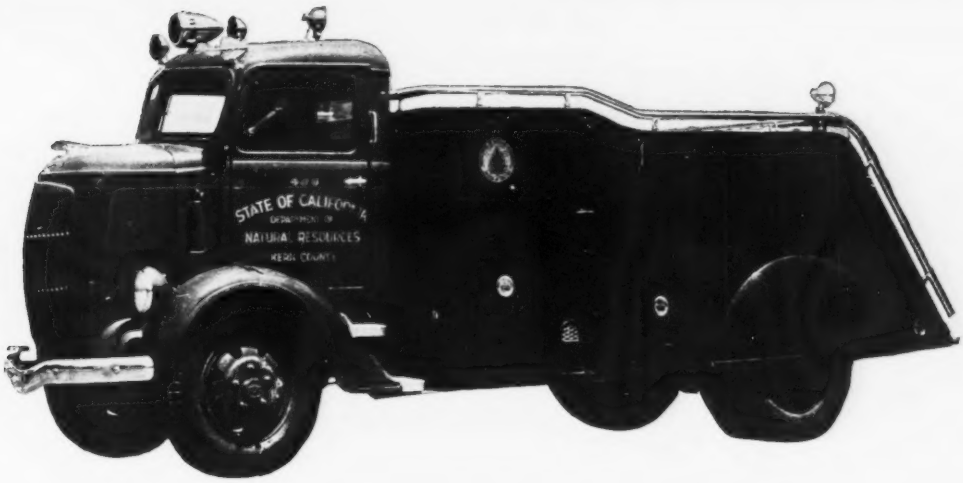

Why A Fog Fire Fighter Should Be YOUR Next Equipment Unit . . .

Because the Fog Fire Fighter takes water from any source, puts out more fire with a pint of water than gallons of solid stream can extinguish and avoids water damage, the Fog Fire Fighter is now recognized as a first line unit in all well organized departments.

Hardie High Pressure pumps and Fog Guns are standard equipment on Fog units built by many leading manufacturers of fire trucks. When you specify Hardie pumps you get volume and pressure instantly, when you want it, and for as long as you want it because the Hardie pump works up to its rating easily, smoothly and AT SLOW SPEED. Specify Hardie. Write for specification data.

THE HARDIE MFG. COMPANY

Hudson, Michigan Los Angeles, Calif. Portland, Oregon

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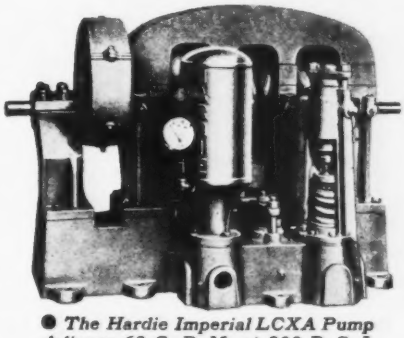
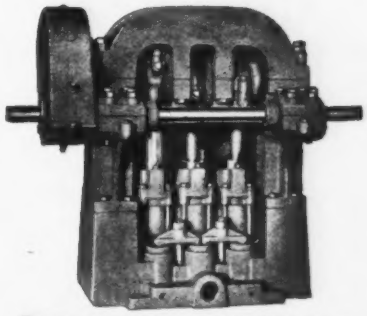
High Pressure **PUMPS AND FOG GUNS for Fog Fire Fighters**

Ready For Any Emergency

Operated by the Kern County California Fire Department, Harold P. Bowhay, Chief, this Hardie equipped Fog Fire Fighter carries a 500 gallon tank, auxiliary pump for low pressures, lighting generator, 1250 watt flood light, 650 feet of hose and gun equipment for both fog and straight stream.



● *The Hardie Imperial LCXA Pump delivers 60 G. P. M. at 800 P. S. I. at 130 R. P. M.*



● *The Hardie Imperial XCXX Pump delivers 35 G.P.M. at 800 P.S.I. at 118 R. P. M.*

Remember This!

The Darley Hi-Lift is a turbine driven centrifugal pump, not to be confused with jet devices, which cannot equal the Hi-Lift for VOLUME of water delivered.

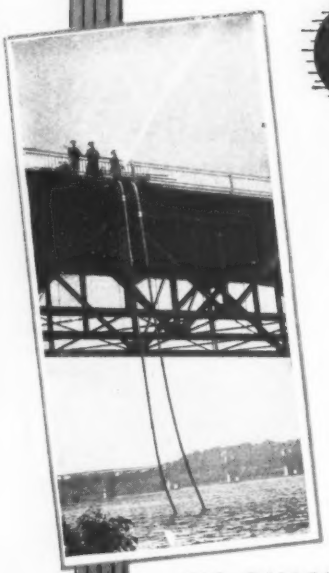
Before you buy check and compare VOLUME.

Modernize Your Dept. with A HI-LIFT

LIFTS WATER 100 FT.

$165 NOT INCLUDING SIAMESE

CHAMPION HI-LIFT SUCTION BOOSTER



30 DAY FREE TRIAL! BUY ON PROOF! MAKE YOUR OWN TESTS!

228 GALLONS PER MINUTE FROM A 57 FOOT LIFT

208 GPM WITH THE TRUCK 73 FEET ABOVE AND 165 FEET DISTANT FROM THE WATER

" . . . if it was not for the HI-LIFT the bridge would have gone and they could not let trains pass for weeks."

CHIEF BRIDGES, KENT, WASH.

CITY OF KENT
WASHINGTON

May 14, 1946

W. S. Darley & Co.
Chicago 12, Illinois

Gentlemen:

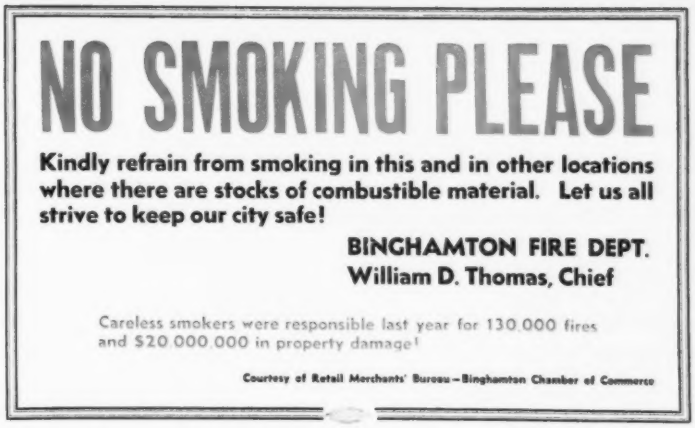
May 11th, we had a fire on a Milwaukee Railroad bridge, 1,000 feet long. The trestle was constructed of heavy timbers and well creosoted. The river was near, and the water 35 feet down from the bank, and fifty feet away. We tossed in our Hi-Lift Suction Booster, and pumped water for two hours steady and saved the 1,000-foot trestle and bridge across the river. The Milwaukee office at Seattle called in four other fire departments and all they could do was look at the fire fighting that was being done by our department because we were the only ones that owned a Champion Hi-Lift Suction Booster. The General Manager, the Superintendent and all the high officials of the Milwaukee Railroad were at this fire and they sure were interested to see that little pump throw so much water. If it hadn't been for the Hi-Lift the bridge would have gone and they could not let trains pass for weeks. Once more we made the Seattle papers on the front page with your Champion Hi-Lift. They replaced three pilings and the trains resumed going over the bridge. There was smoke going up in the sky for 200 feet and flames the same.

Yours truly,

Chas. Bridges, Fire Chief.

W. S. DARLEY & CO.

ESTABLISHED 1908
CHICAGO 12, ILL.


NO SMOKING PLEASE
Kindly refrain from smoking in this and in other locations where there are stocks of combustible material. Let us all strive to keep our city safe!
BINGHAMTON FIRE DEPT.
William D. Thomas, Chief
Careless smokers were responsible last year for 130,000 fires and $20,000,000 in property damage!
Courtesy of Retail Merchants' Bureau—Binghamton Chamber of Commerce

If you're going to ask people not to smoke, this sign distributed by the Binghamton, N. Y., Chamber of Commerce, illustrates a forceful method of putting the message across. Instead of simply saying that smoking was not allowed, the card explains why not and what damages had been wrought by careless smokers.

This Barn Was Saved

THIS story of an all-day barn fire near Clinton Corners, N. Y., was recently submitted to the Editor by Chief Henry F. Drake, of Stanford, N. Y., secretary-treasurer of the New York Association of Fire Chiefs. It should prove of interest to many departments in rural districts, as in Chief Drake's own words, "This is one case that refutes the idea that a barn can never be saved. And in the face of the fact that the local company had a 13-mile run to the fire."

THE east mow, containing forty-five tons of hay, was on fire in a 135- x 42-foot barn when the first apparatus arrived. The wind was from the east.

The local chief called one outside pumper and squad. Two 1½-inch lines were stretched into the barn and the top and sides of the mow were swept with fog and streams. One 2½-inch and two 1½-inch lines were stretched outside.

Smoke was excessive inside the barn, but the ladders were too short to ventilate the top of the roof.

The eastern side of the barn was stripped of boards and studding and about sixteen men with pitchforks and hay knives went to work throwing hay out of the mow. The haymow was on fire about a foot above the mow floor, and all of the forty-five tons had to be removed. Neighbors manned tractors outside and pulled the hay away with grab hooks.

While the men worked in the mow, firemen used the 1½-inch lines to keep the hay from burning around them by occasional shots of water where flames sprang up.

The amazing part of the fire was that when it was extinguished there was only a coverage of about ten square feet of char inside the barn, and the farmer was able to milk the next morning. As the stock on the farm was of high quality and higher price, the fire companies saved the owner thousands of dollars.

The fire call first came in at 9:14 A.M., and the local company returned to the firehouse at 9:05 that night, about nine minutes short of a 12-hour job.

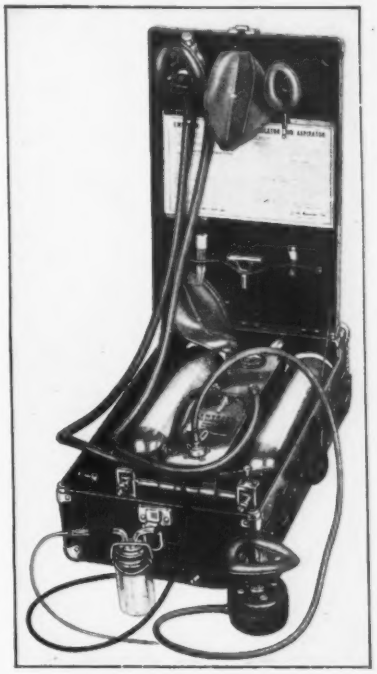
READERS might be interested to know that later investigation by FIREMEN uncovered a fact that Chief Drake failed to mention in his dramatic fire story. It was his department from Stanford, next door to the Clinton Corners fire district, together with the Amenia Fire Department, that extinguished the fire with so little damage to the barn.

Election Note

THE voters of Warwick, R. I., at the general election on November 5 voted at about 7 to 1 in favor of a bond issue to cover the purchase and installation of a Class A fire alarm system, drill tower, and ladder truck in the total amount not exceeding $300,000.

The firemen have also just awarded a contract for fourteen 2-way FM radios for their trucks and seven station monitors.

When Seconds Count
In Saving Human Life
be sure you have an



EMERSON RESUSCITATOR

Leading fire departments throughout the country have from actual experience with serious cases given the Emerson resuscitator, inhalator, and aspirator the reputation of being America's finest lifesaving instrument.

Your men and community are entitled to this protection. Write for literature or a demonstration.

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J. H. EMERSON CO.
24 Cottage Park Ave.,
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Representatives in Principal Cities

TRADE MARK

MEARL FOAM

The all-climate, dependable mechanical foam extinguisher » » » *It flows—covers—seals—extinguishes* » » » Highly effective on oil and gasoline fires—on Class A fires » » » Use with any kind of water—at any temperature—in all makes of equipment.

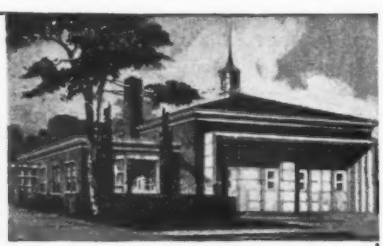
Write for descriptive bulletin

FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N. Y.

Better **FIRE STATIONS** *with* CIRCUL-AIR

THE AIR-CONDITIONING



FIRE HOSE DRYER

We're sure you want your new stations to be of **Modern Design**, simpler . . . streamlined houses in keeping with the times . . . with better lighting, heating, adequate alarm systems, finer apparatus and **FASTER HOSE DRYING.** In eliminating the costly, ugly hose tower of the "gay 90's" **CIRCUL-AIR** improves building appearance and lowers construction cost. Efficient and practical for large central stations, they are ideal for "bungalow" type houses, for villages, townships and fire districts where time-saving, space and costs are decisive factors.

BETTER HOSE DRYING *for* OLD STATIONS *too!*

Without adequate drying equipment, or with towers in need of repairs they are most economical and efficient. Cheaper than a tower, more compact than a drying rack, faster and easier to use than either.

ASK A CHIEF WHO HAS ONE

Or Write for Descriptive Booklet

The CIRCUL-AIR Corporation
NEW ADDRESS
575 E. Milwaukee St. -:- Detroit 2

Montgomery County, N. Y. Volunteer Firemen's Association Announces '47 Meeting Schedule

THE Montgomery County Volunteer Firemen's Association, N. Y., chief's committee recently reported the 1947 schedule of meetings.

Mondays: January 20, Fort Johnson; February 17, Canajoharie; March 17, Hagaman; April 21, Glen; May 19, Fultonville; June 16, Perth; July 21, Minaville; August 18, Fort Hunter; September 15 (annual meeting), Tribes Hill; October 20, Ames; November 17, Fonda; December 8, vacant at the present, either Fort Plain, St. Johnsville, or Sammonsville.

"It Can't Happen Here"

Continued from page 9

The Nowlen lumber sheds were considered a target hazard of the city. The methods used to fight the fire were the same the department had practiced many times in the classroom. Each fire company was thoroughly grounded in the proper method of operation to combat the fire effectively.

So far there has been no loss estimate given out, although the buildings alone were valued at $16,000.

A Modern Bucket Brigade

Continued from page 8

foot circular cistern slightly more than 15½ inches per minute. If we wish, we can call our 500 gpm pumper a 134-cubic-foot pumper.

Waterworks men have one other term that may be of interest to us in measuring large quantities of water. They talk of "millions of gallons per day" when speaking of pump ratings or water consumption. Well, our 750-gallon pumper is a million gallon per day pumper: 750 gallons per minute x 60 minutes . . 45,000 gallons per hour x 24 hours . . 1,080,000 gallons per day. That 750 gpm, or 100-cubic-foot pumper can sure drain a 50,000 gravity tank that was supposed to supply the sprinklers, if we are careless and take 6,700 cubic feet of water an hour from the mill yard hydrants. On long pumping jobs from public mains in small communities, it may be well to check with the water department, as we are equipped to throw a lot of water.

Excuse me, my wife just said, "Did someone leave the faucet running?"

Let's Stop these big losses!

Analysis by the National Fire Protection Association of large-loss fires indicates that in most cases *the fire had gained such headway when discovered that nothing much could be done to control the loss, despite valiant efforts by the fire department.*

These big losses, resulting from belated discovery and delayed alarms, can be most effectively prevented by *automatic* detection and reporting of fires in those vital first few minutes when usually the flames can be easily and quickly controlled.

A. D.T. provides this protection in unsprinklered properties through Aero Automatic Fire Detecting and Alarm Service and in sprinklered properties through Sprinkler Supervisory and Waterflow Alarm Service, which automatically detect the outbreak of fire and summon fire fighting forces immediately and accurately.

Without obligation we'll be glad to show you how these and other A. D.T. Services can help you solve your particular protection problems.

Write us...TODAY.

Controlled Companies of **AMERICAN DISTRICT TELEGRAPH CO.** *155 Sixth Avenue, New York*

CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

A·D·T

Electric Protection Services

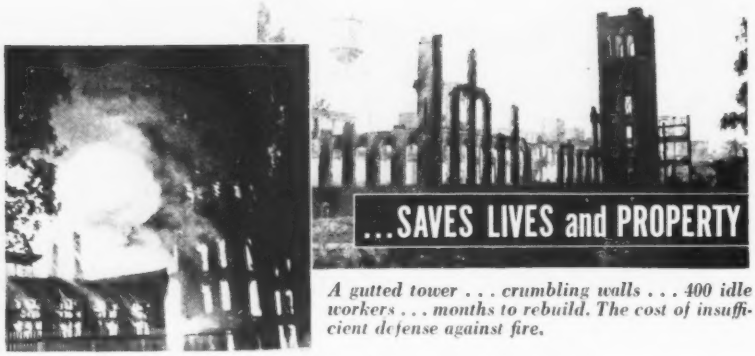
AGAINST FIRE · BURGLARY · HOLDUP

A NATION-WIDE ORGANIZATION

LIGHTNING STRIKES MILL

fire follows...loss set at near $4 million

C-O-TWO detects and kills fires in early stages



A gutted tower . . . crumbling walls . . . 400 idle workers . . . months to rebuild. The cost of insufficient defense against fire.

Like an atomic blast, flames leap above the doomed plant. Lightning had started it—nothing to stop it. C-O-Two immediately locates fire, signals an alarm and snuffs out the fire.

On the night of July 3, 1946, lightning struck the rear section of a building of a large textile mill. Before the fire department arrived, the whole structure was in flames. Despite later assistance of three fire departments from neighboring towns, flames spread and destroyed two plants and several warehouses. The next morning showed a total loss of $3,800,000. Cause: inoperative and inadequate protection.

The C-O-Two Industrial Smoke Detecting and Fire Extinguishing System protects your plant 24 hours a day. The slightest thread of smoke in any protected space sets off an alarm and floods the space with a dry, sub-zero, heavier-than-air cloud of carbon dioxide gas. It sweeps around obstructions, penetrates narrow spaces and snuffs out every trace of fire. Machines, materials, records and electric apparatus are not harmed. Non-conducting, C-O-Two is safe to use on running electric motors and live wires.

Where smoke is present in normal operation, heat-actuated devices set off alarms and discharge carbon dioxide when the temperature rises to a pre-determined point. C-O-Two is available in a size for every risk — famous Squeez-Grip portables, wheeled and hose reel units and complete automatic systems. Write us for more information on safe, modern C-O-Two fire protection.

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

Past President Vernor is Rotary International Official

RICHARD E. VERNOR, manager, Fire Prevention Department, Western Actuarial Bureau, an NFPA past president and director, and chairman of the Fire Department Instructors' Conference in Memphis, is serving as treasurer of Rotary International for the fiscal year, 1946–1947. Mr. Vernor has also been appointed to membership on Rotary's Investment Committee.

★ ★ ★

Fire Drill Manual

THE Oregon State Fire Marshal Department, Salem, has published a *Fire Drill Manual* for Oregon schools. The manual is designed to aid teachers of public and private schools and educational institutions to enforce state fire laws requiring at least one school fire drill a month and requiring that exits be unlocked during school hours. State laws require that teachers devote not less than thirty minutes each month to the instruction of pupils, ages 6 to 14, in fire dangers.

★ ★ ★

New Hydraulics Book

HYDRAULICS FOR FIREMEN, by John J. Theobold, associate professor of civil engineering at the College of the City of New York, has been published by Barnes & Noble, Inc. This 142-page book is available from the publishers for $1, paper bound, or $2, with cloth binding. The author has given courses in hydraulics to New York City firemen and the treatment is essentially that required for theoretical study of the subject for fire department promotional examinations. Like most hydraulics textbooks prepared for victims of civil service torture chambers, the book appears to contain comparatively little of the rule-of-thumb fire stream data so badly needed on the fire ground.

The book contains the following chapters: (1) Physical Properties (of water); (2) Measurement of Pressure; (3) Velocity; (4) Discharge; (5) Friction Loss; (6) The Equivalent Pipe Method; (7) The Hydraulic Gradient in Flow Problems; (8) The Nozzle Pressure Equation; (9) Solution of Relay Problems; (10) Drafting Water; (11) Pumps; (12) Combining Theory and Practice.

Fight Fire the Modern, More Effective Way

with FIRE-SNUFFER NOZZLES *and* *Strangle*AIR FOAM

Not every type of nozzle can deliver foam effectively. FIRE-SNUFFER NOZZLES are specially designed to handle this war-tested fire-fighting agent. And the foam they deliver is of uniform consistency. FIRE-SNUFFER NOZZLES are light, easy to clean and handle and available in standard sizes from 2½ GPM to 250 GPM.

StrangleAIR FOAM is white, odorless, non-toxic, clean and safe to handle or store. It sticks to burning surface and lasts for hours. StrangleAIR eliminates flashbacks and prevents formation of noxious or dangerous fumes. It reduces heat rapidly and makes it possible for firemen to get to the blaze.

Cut fire losses and smoke accidents with FIRE-SNUFFER NOZZLES which may be ordered through fire appliance supply houses.

For prompt, detailed information fill in coupon and mail today.

Please send me illustrated Bulletin 15.

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AMERICAN DIE & TOOL COMPANY, INC., East Reading, Pennsylvania

FIREMEN'S Rubber and Canvas CLOTHING FROM Midwestern

This Midwestern Combination Suit, made of Vanitex, the modern waterproof fabric, is sold separately or together. The "Mackinaw Coat" is a highly serviceable garment with flexible elastic inner sleeves; adjustable collar strap, detachable wool lining, Midwestern safety snaps, two outside pockets, 6" storm flap and many other good features.

Hundreds in use All over America

Midwestern Bunker Pants with detachable wool lining, safety snap on adjustable belt, wide protecting flap, are sturdily constructed with reinforced crotch for pole sliding. Write today

FIREMEN'S BOOTS
Regular Firemen's Boots, ¾ length, available now. We can also supply REGULAR Firemen's Boots, felt lined, reinforced instep. See your Midwestern Manufacturing Company dealer for prices or write the factory.

Mackinaw Coats are Manufactured by

MIDWESTERN MANUFACTURING CO.
MACKINAW, ILLINOIS

TO ALL OUR FRIENDS—

To all our friends in the fire-fighting field we send our best wishes for a 1947 free of serious fires.

The best of equipment depends—for successful fire-fighting—on the men who use it. By the same token, fire-fighters *should always be able to depend on the best of equipment.*

Users of Hale Fire Pumps know that they can count on them for adequate volume and adequate pressure, as needed . . . because of their outstanding flexibility, efficiency and dependability.

Write for latest information on Hale Fire Pumps, built in all standard capacities.

HALE
FIRE PUMP COMPANY
Conshohocken, Pa.

National Fire Protection Association, International

Associate Membership

VOLUNTEER FIRE COMPANY SECTION ($10 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member volunteer fire companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members, receive, at their headquarters, one copy of all publications sent to NFPA associate members.

ASSOCIATE MEMBERSHIP ($10 annual dues) Eligible: Individual fire department officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA **Quarterly**, the monthly **News Letter**, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

New members of the Volunteer Fire Company Section are:

Bryte Volunteer Firemen's Assoc., Bryte, Calif.
Condon Volunteer Fire Dept., Condon, Ore.
Cordova Volunteer Fire Dept., Cordova, Alaska.
Kennett Fire Dept., Kennett, Mo.
Lake Johanna Volunteer Fire Dept., St. Paul 8, Minn.
McGregor Volunteer Fire Dept., McGregor, Texas.
Mt. Union Fire Co., No. 1, Mt. Union, Pa.
Powellhurst Fire Dept., Portland, Ore.
Sheridan Volunteer Fire Dept., Sheridan, Ind.
Sour Lake Volunteer Fire Dept., Sour Lake, Texas.

★ ★ ★

Delaware State Fire Loss

THE report of the 1945 state fire loss for the state of Delaware (population 266,505), not including the city of Wilmington, was recently received. It was a particularly inter-

Courtesy Bob Patterson, Los Angeles Fire Department, Calif.

esting report, as it represented a typical year in a state entirely protected by volunteer fire companies except for Wilmington.

New Castle, Kent, and Sussex County make up the balance of the state of Delaware. Each county entered its report of the year's total fire loss, number of alarms, types of fires, equipment used, and the number of men who worked on the fires.

For example, New Castle used the most hose, 122,946 feet used at 872 fires. Kent raised 4,615 feet of ladder at 598 fires, while Sussex County raised 3,198 feet of ladder at 438 fires. New Castle had 8,274 men in service, with apparatus traveling a total of 9,500 miles; Kent County saw 5,168 firemen going to fires and apparatus traveling 4,011 miles; while Sussex County used more men, 5,414, but only traveled 3,980 miles.

Layton C. Baynard, fire recorder, submitted the state fire loss report, for the Delaware Volunteer Firemen's Association.

* * *

Take It Easy In Case of Fire

THE following is excellent professional advice, written in poetry form by District Chief C. E. Holder, of Wichita, Kans., for anyone who might be trapped in a burning building:

T he exits you must know
A s safety you seek below;
K now more than one way out
E levators may go out.

I would call the fire department,
T hen awaken other guests.

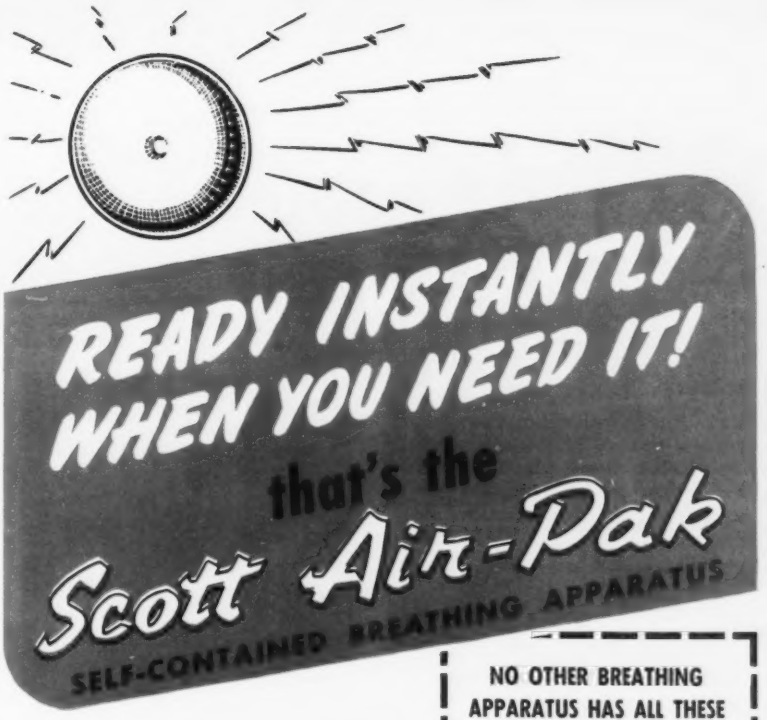
E xtinguishers located before
A re easy to find and use;
S aving lives and property
Y ou remain calm and steady.

I f you are prepared already
N ever run — it causes panic.

C aution — halls may be superheated,
A hand upon the door feels the
S uperheated condition of the hall;
E xit this way stopped.

O ther means of escape
F irst must be found

F resh air at window may be had
I f you raise it a little;
R emember, call for help,
E xpect a ladder rescue.



The moment the alarm is given—be it a Fire Gong—a Mine Disaster—an Underwater Tragedy—an Industrial Emergency—the Scott Air-Pak is *READY* for instant use.

Donned in less than a minute, the Air-Pak is ready for rescue or protective duty—immediately. No lengthy make-ready time while precious minutes elapse.

And its fresh, cool air gives confidence to the user.

Distributed by leading Safety Equipment Houses from Coast to Coast.

NO OTHER BREATHING APPARATUS HAS ALL THESE VITAL ADVANTAGES

1. A quick-connect that cannot be cross threaded easily and quickly engaged.
2. All-purpose working equipment—not just rescue apparatus.
3. A regulator—proved by thousands of hours of usage.
4. Fresh, cool air—not oxygen.
5. No complicated training or practice needed.
6. Absolutely clear lenses—no fogging.
7. A gauge *specifically designed* to provide a constant check on available air supply under all conditions.

Bureau of Mines Approval No. 1308

...BREATHE FRESH, COOL AIR IN EVERY BREATHING HAZARD

Established in 1932

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

236 ERIE STREET, LANCASTER, N. Y.

FOR SAFETY—FOR SERVICE

"THERE CAN BE NO COMPROMISE WITH QUALITY WHEN A LIFE IS AT STAKE"

SAVE VALUABLE PLANTS & MATERIALS

Fyr-Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasize the urgent need of fire protection. A complete line of UNDERWRITERS LABORATORIES Labeled FIRE EXTINGUISHERS.

HELP SAVE LIVES AND PROPERTY

Get Fyr-Fyters for safety's sake. We advise and serve manufacturing plants, public institutions, etc., immediately. Write us today regarding Fyr-Fyter equipment for your own protection.

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FOR EVERY EMERGENCY

CLEAR YOUR WAY

Flash'N'Wag
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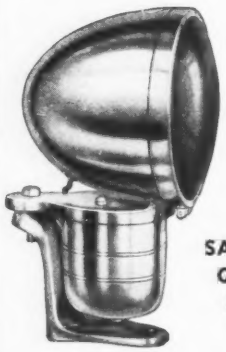
WIGWAG RED HEAD
COMBINATION
FLASHING AND OSCILLATING
RED BEAM 1000 FT. AHEAD



Clears Your Side of Street Too!

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FASTER
RUNS

CARPENTER MFG. CO.
"MASTER-LIGHT MAKERS"
168 MASTER-LIGHT BLDG.
BOSTON 45, MASS.

MANUFACTURERS' ANNOUNCEMENTS

Scott Air-Pak Gets Bureau of Mines Okay

The Scott Air-Pak, designed and manufactured by the Scott Aviation Corp. of Lancaster, New York, has just been granted Approval No. 1308 by the Bureau of Mines. This equipment, according to the manufacturer, has been widely accepted by municipal fire departments for both rescue equipment and

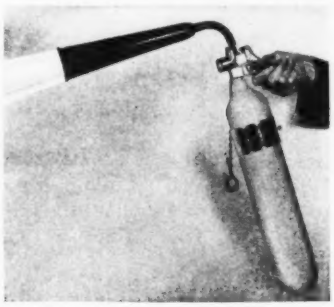
for firemen or other persons to safely enter a smoke filled area or an area with air contaminated by ammonia or other noxious or deadly fumes. It also allows the firemen to locate the source of a fire without danger of asphyxiation while doing so. Its further versatility is attested by its use as underwater breathing equipment for marine rescue, salvage, or repair work. Further information may be had by writing to Safety Equipment Division, Scott Aviation Corporation, Lancaster, New York.

New Models Announced by Ansul

Greatly increased fire-stopping power is one of the many advantages claimed for the new Ansul-Dugas dry chemical fire extinguishers announced recently by the Fire Extinguisher Division of Ansul Chemical Co., Marinette, Wis. Other important features claimed are: simplified and faster operation, quicker and easier on-the-spot recharge, greater heat-shielding protection for the operator, expert extinguishing by inexperienced operators and greater capacity without increased weight. They are listed and approved by the Underwriters' Laboratories and Factory Mutual Laboratories.

Small "Speedex" Extinguisher Introduced by La France

A new "mighty midget" fire extinguisher has just been announced by American-La France-Foamite Corp. of



Elmira, N. Y. It is called the Alfco Speedex — with contents weighing only 3-5/8 lbs., but which expand upon release to 450 times their contained volume. It is only 3-9/16" in diameter with an overall length of 22 inches. It is operated by quick acting squeeze-type valve which releases the carbon dioxide extinguishing agent by palm pressure. Its rating by the Underwriters' Laboratories is B-2; C-2. Free literature is available from the manufacturer.

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ARLINGTON, ILL. *Standard FMC Fog Fire Fighter delivered to Arlington Fire Protection District.*

MENDOTA-TROY, ILL. *Standard FMC Fog Fire Fighter delivered to Mendota-Troy Rural Fire Protection District.*

CHIEF SAYS:

A prominent Chief in a large city says, "We are getting many compliments from property owners about no water damage and about our speed in putting out fires with our FMC High-Pressure systems."

PHARR, TEXAS. *Standard FMC Fog Fire Fighter delivered to Pharr Fire Department.*

That's not surprising. The facts of FMC fire-fighting efficiency are true everywhere—whether population is three-million, three-thousand, 300 or even less.

FMC High-Pressure Fog does more quenching—with only a fraction of the water needed by old-type units. This is what hundreds of FMC users have learned by their own experience fighting fires.

Stop the fire right where it is . . . cut to a minimum the old-time terrific water damage! That's the aim of progressive fire departments today. And that's exactly what FMC High-Pressure will do for you.

Get the facts! Investigate the FMC High-Pressure Fog Fire Fighting System.

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UNDERWRITERS' LABORATORIES APPROVED

FLINT TOWNSHIP, MICH. *Standard FMC Fog Fire Fighter recently delivered to Flint Township Fire Dept. No. 1. Carries its own water supply—provides two guns of 30 gallons each—850 lbs. pump pressure—complete in every respect.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

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BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

DELAYED ALARMS

CAUSE FIRE DISASTERS

WHEN FIRE OCCURS——PULL A FIRE ALARM BOX

IMMEDIATELY!

"It is generally recognized that there is no other thoroughly satisfactory means of sending and receiving fire alarms than an approved fire alarm telegraph system. Telephones should not be relied upon to replace needed boxes nor to supplement any inadequacy in number or location of boxes."

—National Fire Protection Association

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